

The American Radio Relay League

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ARRL is an incorporated association without capital stock chartered under the laws of the state of Connecticut, and is an exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1986. Its affairs are governed by a Board of Directors, whose voting members are elected every three years by the general membership. The officers are elected or appointed by the Directors. The League is noncommercial, and no one who could gain financially from the shaping of its affairs is eligible for membership on its Board.

"Of, by, and for the radio amateur," ARRL numbers within its ranks the vast majority of active amateurs in the nation and has a proud history of achievement as the standard-bearer in amateur affairs.

A *bona fide* interest in Amateur Radio is the only essential qualification of membership; an Amateur Radio license is not a prerequisite, although full voting membership is granted only to licensed amateurs in the US.

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The purpose of QEX is to:

- 1) provide a medium for the exchange of ideas and information among Amateur Radio experimenters,
- 2) document advanced technical work in the Amateur Radio field, and
- 3) support efforts to advance the state of the Amateur Radio art.

All correspondence concerning *QEX* should be addressed to the American Radio Relay League, 225 Main Street, Newington, CT 06111 USA. Envelopes containing manuscripts and letters for publication in *QEX* should be marked Editor, *QEX*.

Both theoretical and practical technical articles are welcomed. Manuscripts should be submitted in word-processor format, if possible. We can redraw any figures as long as their content is clear. Photos should be glossy, color or black-and-white prints of at least the size they are to appear in *QEX* or high-resolution digital images (300 dots per inch or higher at the printed size). Further information for authors can be found on the Web at www.arrl.org/qex/ or by e-mail to qex@arrl.org.

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Empirical Outlook

Dayton

As I write this, the 2009 Dayton Hamvention and ARRL National Convention are recent history. The ARRL Expo area had a number of new features this year. I can't take any credit for the success of any of part of the Expo, but I was sure proud to be able to participate in some of the excitement!

ARRL Lab Test Engineer, Bob Allison, WB1GCM, organized the first kit building section of ARRL Expo. He was assisted by ARRL Education and Technology Program Coordinator, Mark Spencer, WA8SME and Nathan McCray, K9CPO, all weekend. Several others assisted with a number of of the building "classes," including yours truly. Bob had two kits available for the builders — either a 24 hour digital clock or an electronic keyer. These kits were designed by Mark Spencer, and packaged by Mark's wife Doris, KF6QKL.

Bob reports that over 40 kits were built during the weekend. While in raw numbers that doesn't sound like many, the fun and excitement on the faces of those builders was well worth the effort! Builders ranged from pre-teen to 70+ year olds, with many first timers and a few who just hadn't built anything in a while and wanted to try their hand again under a watchful eye. At one point there was a young pre-teen boy who was building a clock kit with some help from his mother. After he carefully soldered his first resistor and then clipped the excess leads he looked up with a huge grin and exclaimed, "I learned how to solder!" His smile was even wider when he first applied power, and the clock display came on. There were several teens, including at least one General class ham, who had some building experience, and wanted to work on their kits with little or no additional help.

I was able to offer a few tips, such as always wear your safety glasses when soldering or clipping component leads, point the circuit board slightly away from your face and place a finger on top of that lead before you cut it, to help control it and prevent it from flying away (or towards an eye).

I also talked to quite a few Hamvention attendees who were very pleased to see ARRL sponsoring an activity like the kit building, and helping teach some youngsters (and some not so young) the joy that they have experienced over the years. Of course the real lesson here is that ARRL is not just a group of Headquarters employees and a few volunteers doing this at a major convention. ARRL is every member, and those members — both individually or as part of a club — can take advantage of many opportunities to share the thrill of building equipment. I hope we helped inspire many more hams to teach others about the fun of building a project.

In addition to Amateur Radio, the Scouting program is one of my favorite pastimes. ARRL has a long history of supporting Scouting and Amateur Radio programs, including the Radio Merit Badge, the annual Jamboree on the Air (always the third full weekend of October) and an Amateur Radio presence at National Jamborees, typically held every four years. As part of this year's Dayton ARRL Expo area, a group of dedicated Scout Leaders set up and staffed a space for Scouts and Leaders to meet and share ideas for introducing Scouts to the fun and excitement that we know as ham radio. While I did not help to staff this area, I was able to meet with many Scout Leaders, and it was a lot of fun to share ideas and learn from many of them.

I also spent quite a bit of time around the TAPR booth. This was an opportunity to talk about some of the projects that TAPR members are working on, and to help explain some of the displays operating there. While a 15 foot contact on 6 meters isn't all that exciting, making that contact with a pair of transceivers as part of the high performance software defined radio (HPSDR) project was exciting. I have seen the HPSDR setup a few times now, at a couple of ARRL/TAPR Digital Communications Conferences and last year at Dayton. (For more information about the 2009 DCC in Chicago, Sep 25 - 27 see Upcoming Conferences in this issue and www.tapr.org.)

The HPSDR project has definitely evolved! This year, the radios included the "Atlas" backplane with "LPU" power supply, "Penelope" 1/2 W transmitter, "Mercury" receiver, "Ozy" interface/controller cards plugged in along with "Alex" external filter cards. The systems were mounted in "Pandora" metal enclosures that were being sent for screen printing of labels at the end of Hamvention. Most of the boards are either available from TAPR or expected to be available shortly, including the cabinets (www.tapr.org). There was also a "Pennywhistle" 20 W amplifier module prototype on display.

One common question about the HPSDR display was, "Why should I be interested in HPSDR rather than a (commercial product)?" The simple answer is that if you want a finished, commercial package there are a number of software defined radios available, but if you want something that requires some building, and invites experimentation and more learning about the hardware and software, then you might be interested in HPSDR. I am pretty sure that many *QEX* readers are interested in learning about and experimenting with technology, in one form or another. I hope you are having as much fun with our hobby as I am!